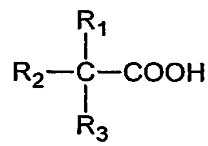
CLAIMS

1) A method for modyfing at least an electronic property of a nanotube or nanowire comprising exposing said nanotube or nanowire to an acid having the formula



wherein R_1, R_2 and R_3 are chosen in the group comprising (H, F, Cl, Br, I) with at least one of R_1, R_2 and R_3 being different from H.

2) A method according to claim 1 wherein $R_1 = F$.

3) A method according to claim 2 wherein $R_1 = R_2 = F$.

4) A method according to claim 3 wherein $R_1 = R_2 = R_3 = F$.

5) A method according to any one of the preceeding claims wherein at least part of said nanotube or nanowire is a channel region of a field effect transistor.

6) A method according to claim 5 wherein said nanotube or nanowire is submitted to said exposition after the transistor is formed.

7) A method according to claim 6 wherein at least one characteristic of the transistor is measured to monitor the modification of said at least an electronic property of the nanotube or nanowire .

8) A method according to claim 7 wherein said transistor has a back gate electrode that is used to monitor said exposure to an acid.

9) A method according to claim 8 wherein after the completion of said exposure, a dielectric layer is brought on at least part of the nanotube or nanowire.

10) A method according to claim 9 wherein at least one top gate electrode is brought on said dielectric layer.

11) A method according to claim 9 wherein said dielectric layer covers the whole surface of the nanotube or nanowire .

12) A method according to claim 6 wherein after said exposition the nanotube or nanowire is covered by an impervious layer.

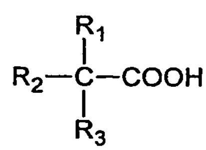
13) A method as in claim 12 wherein said impervious layer is an oxide layer.

14) A method as in claim 12 wherein said impervious layer is a resin layer.

15) A method according to claim 6 wherein the transistor has several gate insulating layer regions each having a gate electrode thereon, and wherein the regions of the nanotube or nanowire between said insulated layer regions are submitted to said exposure to an acid.

16) A method as in claim 15 wherein said nanotube or nanowire is in an undoped condition before being submitted to said exposure.

17) A P-type nanotube or nanowire having an absorbed substance that is an acid having the formula :



and wherein R_1, R_2 and R_3 are chosen in the group comprising (H, F, Cl, Br, I) at least one of R_1, R_2 and R_3 being different from H.

18) A nanotube or nanowire according to claim 17 wherein $R_1 = F$.

19) A nanotube according claim 18 wherein $R_1=R_2=F$.

20) A nanotube or nanowire according to claim 19 wherein $R_1 = R_2 = R_3 = F$.

21) A nanotube or nanowire according to any one of claims 17 to 20 at least part of said nanotube or nanowire being a channel region of a field effect transistor having a source electrode, a drain electrode and at least one insulated gate electrode.

22) A nanotube or nanowire as in claim 21 wherein said transistor is a sensor for detecting said acid.

23) A nanotube or nanowire as in claim 21 wherein at least one insulated gate electrode is disposed over the nanotube or nanowire.

24) A nanotube or nanowire as in claim 23 comprising a plurality of insulated gate electrodes disposed on undoped regions of the

nanotube or nanowire and being separated by regions in wich a said acid is absorbed.

25) A nanotube or nanowire as in claim 21 wherein a said insulated gate electrode is constituted by a substrate covered by an insulating region on which the nanotube or nanowire is disposed.